

Support for Publication of the Proceedings of the 2004 International Radiation Commission

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This report is divided in four parts:

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1. Brief introduction

The International Radiation Commission (IRC) is one of the ten commissions of IAMAS (International Association of Meteorology and Atmospheric Sciences). The IRC is composed of 41 members from 18 countries. Topics of current concern for the IRC include optical phenomena in the atmosphere, radiative properties of atmospheric constituents and the Earth surface, radiative transfer in atmospheres, radiant energy interaction with other features of the atmosphere (dynamics, climate etc.) and remote sensing of Earth and planetary atmospheres and surfaces.

An important activity of IRC, the International Radiation Symposium (IRS) is held every four years to promote atmospheric radiation studies. The last IRS took place in 2004 in Busan/Korea.

2. Preface of the Proceedings

The International Radiation Symposium (IRS 2004) on Current Problems in Atmospheric Radiation was held during August 23 till 28, 2004 at Busan Exhibition and Convention Centre (BEXCO), Busan, Korea. It was the first in Asia since IRS 1972 in Sendai/Japan.

The Symposium has been organized by the International Radiation Commission and hosted jointly by the Korean Meteorological Society (President: Dr. Hyo-Sang Chung) and the Centre of Atmospheric Environment Research of Seoul National University (Director: Prof. Dong-Kyou Lee). The conference focused on providing opportunities for exchanging advanced ideas and experiences on current problems in atmospheric radiation. It presented a platform for discussing and reviewing knowledge of spectroscopy, radiative transfer theory and modelling, remote sensing and weather and climate applications. The Symposium attracted about 340 scientists from 25 countries who presented approximately 370 papers in plenary and poster sessions.

The Symposium afforded an ideal opportunity to honour the first recipients of the Commission's new awards, the Gold Medal and the Young Scientist Award, which were presented to Professor Richard Goody of Harvard University and Dr. Toshihiko Takemura

of Kyushu University, respectively. The IRC Gold Medal is designed to honour a senior scientist who has made contributions of lasting significance to the field of radiation research. The IRC Young Scientist Award consists of a 500 US\$ cash award to a young scientist who has made recent noteworthy contributions to radiation studies and is regarded as becoming a leading radiation scientist in the future.

The proceedings of this conference are organized into the nine sessions of IRS 2004:

1. Topical Union Session
2. Radiative Transfer Theory and Modelling
3. Molecular Radiative Properties
4. Particle Radiative Properties
5. General Remote Sensing
6. Satellite Measurements (including Precipitation Measurements from Space)
7. Surface Measurements and Field Experiments
8. Radiative Budget and Forcing
9. Weather and Climate Applications

As at previous meetings, not all the authors provided manuscripts for these proceedings. Also, some of the submitted papers have not been accepted after the comprehensive reviewing process. Readers wishing copies of those not published here are encouraged to contact the corresponding author directly, using the address in the list of participants provided in this book.

We are looking forward to see you at the next International Radiation Symposium (IRS 2008) and to learn about your new research studies conducted during the coming years.

3. Acknowledgements of the Proceedings

We would like to thank all those who contributed to the success of IRS 2004. Special thanks are expressed to the Korean Meteorological Society (KMS, President: Dr. Hyo-Sang Chung) and the Atmospheric Environmental Research Institute of Seoul National University (Director: Prof. Dong-Kyou Lee) for serving as conference hosts, and Meci International, Inc. for supporting the organization of the symposium.

Appreciation is extended to the Local Organizing Committee (LOC), including the Chair Prof. Byung-Ju Sohn, the Co-Chair Prof. Young-Seup Kim, the Secretary Dr. Jae-Cheol Nam as well as the members of the Steering Committee (Prof. Jae H. Park (Seoul Natl. Univ.), Dr. Sung-Nam Oh (METRI/KMA), Prof. Jhoon Kim (Yonsei Univ.), Dr. Myoung-Hwan Ahn (METRI/KMA), Prof. Myoung-Seok Suh (Kongju Natl. Univ.), Prof. Jung-Moon Yoo (Ewha Womans Univ.), Prof. Chang-Hoi Ho (Seoul Natl. Univ.), Prof. Jae-Hwan Kim (Busan Natl. Univ.), Prof. Tae-Yong Kwon (Kangnung Natl. Univ.), and Prof. Kwang-Mog Lee (Kyungpook Natl. Univ.)) and the members of the Advisory Committee (Prof. Hi-Ku Cho (Yonsei Univ.), Prof. Chong-Heum Kwak (Kongju Natl. Univ.), Prof. Dong-Kyou Lee (Seoul Natl. Univ.), Prof. Jong-Ghap Jhun (Seoul Natl. Univ.), and Dr. Hong-Yul Paik (Korea Aerospace Research Institute)). LOC took care of the planning of the symposium, making arrangements in Busan, and running the symposium smoothly.

The Scientific Program Committee consists of the IRC officers (President Prof. Herbert Fischer (Germany), Vice-President Prof. Teruyuki Nakajima (Japan), Secretary Prof. Robert G. Ellingson (USA)), the chair of LOC (Prof. Byung-Ju Sohn) and the main conveners of the symposium sessions (Prof. Robert F. Cahalan (USA), Dr. Shepard A. Clough (USA), Dr. Jose Vanderlei Martins (USA), Prof. Yuriy M. Timofeyev (Russia), Prof. Jae H. Park (Korea), Prof. Atsumu Ohmura (Switzerland), Dr. Thomas Charlock (USA), and Dr. V. Ramaswamy (USA)). The Scientific Program Committee organized the nine sessions, arranged for the co-conveners for the sessions and solved the delicate

task of arranging the larger number of papers in a reasonable schedule of talks and poster presentations.

We thank also the responsible organizers of the accompanying program which gives some insight in the Korean culture and impresses particularly the colleagues from western countries.

The following national and international institutes, organisations and companies have sponsored IRS 2004: Seoul National University (SNU, Korea), BK21 School of Earth and Environmental Science of SNU (SNU/SEES, Korea), Climate Environment System Research Center (SNU, Korea), Korean Meteorological Research Institute (METRI/KMA, Korea), Korea Aerospace Research Institute (KARI, Korea), Forschungszentrum Karlsruhe (Germany), International Association for Meteorology and Atmospheric Sciences (IAMAS), Department of Energy (DoE, USA), EUMETSAT (Europe), Eko/Kipp & Zonen Alliance.

Their generous support of this symposium provided the financial resources to support the travel, registration fees, and local subsistence expenses for a considerable number of scientists who were not able to get adequate funding in their countries. Also, the publication of these proceedings became possible. Further supporting organisations were Busan Metropolitan City, Korea Meteorological Administration (KMA), Korea Science and Engineering Foundation (KOSEF) and Korea National Tourism Organization.

The organization of the proceedings was performed mainly by the Scientific Program Committee, of course with the help of many co-conveners of the sessions and further acknowledged scientists. We are grateful to Ms. Won-Ju Na, Mrs. Seong-Chan Park, Hyun-Jong Oh, Eui-Seok Chung, Keun-Hyuk Ryu, Hyoung-Wook Chun, Ho-Sun Park, Ms. Hye-Suk Park, Hyo-Jin Han, and Seung-Hee Ham, who provided editorial assistance of these proceedings, and to Ms. Diana McQuestion of Deepak Publishing Co., who supported us in preparing the manuscripts in a suitable form. Certainly, we thank all the contributors to these Proceedings.

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